in homozygous sickle cell disease (SS) and 5.5 percent in SC/S-β-thalassemia disease. The numbers of patients were 26 and 19, respectively. The difference in frequency between the two groups is not statistically significant ($P>0.05$). Yet the authors state that patients with Hb SC and Hb S-β-thalassemia only should arrange in advance for inflight oxygen. They add: "We believe that adult patients with Hb SS do not need supplemental oxygen unless they are among the 6 percent of adult patients with Hb SS and intact spleens." Admittedly, there are fewer instances of splenic crises in SS disease (4.3 percent as compared with 8 percent in other forms), but it is not splenic crises only that we need to or can prevent by supplemental oxygen. The 6.5 percent of patients with Hb SS who do suffer vasoocclusive crises could benefit from inflight oxygen.

The authors also found that whereas 42.9 percent of SS patients in Reno (elevation 4,400 ft) suffered vasoocclusive crises, only 31 percent of SS patients in Lake Tahoe (elevation 6,320 ft) had similar complications. This difference is significant ($P<0.05$). Watson-Williams also noted this in his critique of the paper,[2] but neither he nor the original authors could provide an explanation for this seeming contradiction. In fact, there is no contradiction. Among other things, the sickling process of deoxyHb S is allosterically modified by pH and 2,3-diphosphoglycerate (2,3-DPG). Lowering the pH hastens sickling by decreasing the oxygen affinity of Hb S via the Bohr effect. In contrast, 2,3-DPG has no independent effect on the polymerization of Hb S. Instead it alters pH, which in turn enhances polymerization.[3] It follows, therefore, that if the pH effect of 2,3-DPG is annulled by respiratory alkalosis, which occurs to a greater degree at 6,300 ft than 4,400 ft, it cannot influence polymerization of Hb S. While this phenomenon cannot adequately explain the reduced frequency of crises in patients from Denver when they are exposed to high altitudes,[4] a comparison of the two studies done so far on the subject[1,4] cannot be made since one recorded the frequency of vasoocclusive *events*[1] and the other recorded the number of *patients* who developed similar symptoms.[4] In any event, this is one of the more intriguing findings in Claster and associates' study and deserves future investigation.

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Diagnosis of Testicular Torsion

TO THE EDITOR: Two important caveats should be added to Marshall's excellent, though necessarily brief, review of progress in the diagnosis of testicular torsion.[1] One is that use of a Doppler ultrasonic stethoscope must include compression of the ipsilateral spermatic cord with abolition of pulsations to assure that blood flow through the testicular artery and not inflamed scrotal skin is being tested.[2]

Another caution to practitioners would be that pyuria, while unusual, may accompany torsion.[3,4] Increasing numbers of white cells make torsion less and less likely, but there is no specific dividing line, making consideration of all clinical features, appropriate use of noninvasive tests and early exploration necessary for achieving higher testicular salvage rates.

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Holistic Medicine: Advances and Shortcomings

TO THE EDITOR: In "Holistic Medicine: Advances and Shortcomings" in the June issue[1] of the journal, Dr. James S. Gordon's definition of holistic medicine reads very well. However, I would point out that he analyses only an incomplete concept of holistic medicine. One of the references in his paper is to Jerome Frank, professor of psychiatry and behavioral sciences at Johns Hopkins. In a later article, Dr. Frank[2] analyses the three divisions of holistic medicine: the exotic, the supernatural and the naturalistic.

Dr. Gordon seems to have omitted the middle aspect, which Dr. Frank defines as

> a variety of phenomena that have been variously termed paranormal, transpersonal, occult and the like. These include healing through prayer as well as phenomena such as mystical experiences, telepathy and precognition. What they have in common is that they are experienced only in altered states of consciousness and seem to occur in levels of reality or orders of existence that differ fundamentally from the everyday reality in which we live most of the time. Thus, they are "supernatural" in the strict dictionary definition of the term.[2]

This is a far cry from biomedical medicine. There is room aplenty in biomedical medicine for the uniqueness of the individual, patient responsibility for health, influence of social and economic factors, and broadening and enriching of medical practice—items italicized by Dr. Gordon. Holistic medicine sounds inspirational to the uncritical ear, but it includes supernatural subsets that are the antithesis of biomedical practice.

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Needle in the Foot

TO THE EDITOR: A needle in the foot is a common problem for all physicians in primary and surgical care. Treatment is compounded by the fact that the removal of the foreign object may involve just a few minutes or, sometimes, hours. This is sometimes accomplished in a physician's office, an emergency room or an operating room. At times, this is done under local, regional or general anesthetic.

Most often, a foreign object in the foot is a sewing needle or a pin.[1] Other objects, such as glass, wooden splinters or fragments of tissue may or may not be radiopaque.

Various techniques have been devised to remove such objects. These include, often, blind dissection through the entry wound, needle localization by stereotactic techniques, xeroradiography[2] or tagging hemoclips[3] and using serial x-ray studies.

Our technique is to bring the patient to the fluoroscopy unit, where the wound is appropriately prepped with a povidone-iodine (Betadine) solution. A small 1-cm incision is made over the entry site of the radiopaque object and a small hemostat is used to remove the foreign body. It is understandable that in watching the object under fluoroscopy, one can have difficulty removing it blindly. The object moves significantly when touched with the hemostat, and sensation of touching a solid object is readily transmitted through the hemostat handle. The hemostat is not opened for grasping until the foreign body is touched.

The most efficient use of a fluoroscope can be best achieved by a position that will allow vertical approach to the foreign body. The hemostat is directly parallel to the fluoroscopic beam, thus insuring contact on the first pass by eliminating the X axis. Under fluoroscopic control, both the needle and the hemostat are visualized and the object is usually quickly removed.

The time required for removal is usually well within one minute. Only rarely does it involve significant discomfort to the patient.

It is our recommendation that in patients with radiopaque foreign objects requiring removal, this be done under fluoroscopic control.

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Thrombotic Thrombocytopenic Purpura

TO THE EDITOR: The good discussion of thrombotic thrombocytopenic purpura by Kacich and Linker, which appears in the June issue,[1] is incomplete without mentioning that Moschcowitz first reported that disorder in 1925[2] and that since then it has been known as Moschcowitz's disease.

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